

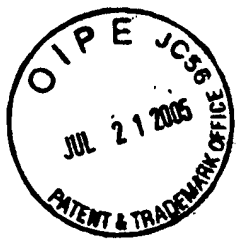


# REPLACEMENT SHEET

FIGURE 4

1	Met	Arg	Ser	Ser	Lys	Asn	Val	Ile	Lys	Glu	Phe	Met	Arg	Phe	Lys	Val	16
1	ATG	CGC	TCC	TCC	AAG	AAC	GTC	ATC	AAG	GAG	TTC	ATG	CGC	TTC	AAG	GTG	48
17	Arg	Met	Glu	Gly	Thr	Val	Asn	Gly	His	Glu	Phe	Glu	Ile	Glu	Gly	Glu	32
49	CGC	ATG	GAG	GGC	ACC	GTG	AAC	GGC	CAC	GAG	TTC	GAG	ATC	GAG	GGC	GAG	96
<b>His(CAC) for E8 and E83</b>																	
33	Gly	Glu	Gly	Arg	Pro	Tyr	Glu	Gly	His	Asn	Thr	Val	Lys	Leu	Lys	Val	48
97	GGC	GAG	GGC	CGC	CCC	TAC	GAG	GGC	CAC	<u>AAC</u>	ACC	GTG	AAG	CTG	AAG	GTG	144
49	Thr	Lys	Gly	Gly	Pro	Leu	Pro	Phe	Ala	Trp	Asp	Ile	Leu	Ser	Pro	Gln	64
145	ACC	AAG	GGC	GGC	CCC	CTG	CCC	TTC	GCC	TGG	GAC	ATC	CTG	TCC	CCC	CAG	192
<b>Met(ATG) for AG4 and AG45/Ala(GCG) for E83</b>																	
65	Phe	Gln	Tyr	Gly	Ser	Lys	Val	Tyr	Val	Lys	His	Pro	Ala	Asp	Ile	Pro	80
193	TTC	CAG	TAC	GGC	TCC	AAG	<u>GTG</u>	TAC	GTG	AAG	CAC	CCC	GCC	GAC	ATC	CCC	240
81	Asp	Tyr	Lys	Lys	Leu	Ser	Phe	Pro	Glu	Gly	Phe	Lys	Trp	Glu	Arg	Val	96
241	GAC	TAC	AAG	AAG	CTG	TCC	TTC	CCC	GAG	GGC	TTC	AAG	TGG	GAG	CGC	GTG	288
<b>Ala(GCG)-for E5, E57, AG4 and AG45</b>																	
97	Met	Asn	Phe	Glu	Asp	Gly	Gly	Val	Val	Thr	Val	Thr	Gln	Asp	Ser	Ser	112
289	ATG	AAC	TTC	GAG	GAC	GGC	GGC	GTG	<u>GTG</u>	ACC	GTG	ACC	CAG	GAC	TCC	TCC	336
<b>His(CAC)-for AG45</b>																	
113	Leu	Gln	Asp	Gly	Cys	Phe	Ile	Tyr	Lys	Val	Lys	Phe	Ile	Gly	Val	Asn	128
337	CTG	CAG	GAC	GGC	TGC	TTC	ATC	<u>TAC</u>	AAG	GTG	AAG	TTC	ATC	GGC	GTG	AAC	384
129	Phe	Pro	Ser	Asp	Gly	Pro	Val	Met	Gln	Lys	Lys	Thr	Met	Gly	Trp	Glu	144
385	TTC	CCC	TCC	GAC	GGC	CCC	GTG	ATG	CAG	AAG	AAG	ACC	ATG	GGC	TGG	GAG	432
145	Ala	Ser	Thr	Glu	Arg	Leu	Tyr	Pro	Arg	Asp	Gly	Val	Leu	Lys	Gly	Glu	160
433	GCC	TCC	ACC	GAG	CGC	CTG	TAC	CCC	CGC	GAC	GGC	GTG	CTG	AAG	GGC	GAG	480
<b>Thr(ACC) for E57</b>																	
161	Ile	His	Lys	Ala	Leu	Lys	Leu	Lys	Asp	Gly	Gly	His	Tyr	Leu	Val	Glu	176
481	<u>ATC</u>	CAC	AAG	GCC	CTG	AAG	CTG	AAG	GAC	GGC	GGC	CAC	TAC	CTG	GTG	GAG	528
<b>Val(GTC) for E83</b>																	
177	Phe	Lys	Ser	Ile	Tyr	Met	Ala	Lys	Lys	Pro	Val	Gln	Leu	Pro	Gly	Tyr	192
529	TTC	AAG	TCC	<u>ATC</u>	TAC	ATG	GCC	AAG	AAG	CCC	GTG	CAG	CTG	CCC	GGC	TAC	576
<b>Thr(ACC) for E5, AG4 and AG45/Ala(GCC) for E57</b>																	
193	Tyr	Tyr	Val	Asp	Ser	Lys	Leu	Asp	Ile	Thr	Ser	His	Asn	Glu	Asp	Tyr	208
577	TAC	TAC	GTG	GAC	<u>TCC</u>	AAG	CTG	GAC	ATC	ACC	TCC	CAC	AAC	GAG	GAC	TAC	624
209	Thr	Ile	Val	Glu	Gln	Tyr	Glu	Arg	Thr	Glu	Gly	Arg	His	His	Leu	Phe	Leu *** 229
625	ACC	ATC	GTG	GAG	CAG	TAC	GAG	CGC	ACC	GAG	GGC	CGC	CAC	CAC	CTG	TTC	CTG TAA 678

(SEQ ID NO:07 & 8)



# REPLACEMENT SHEET

FIGURE 9

GGA TCC GCT CAG TCA GAG CAC GGT CTA ACA GAA GAA ATG ACA ATG AAA  
BamHI A Q S E H G L T E E M T M K

TAC CGT ATG GAA GGG TGC GTC GAT GGA CAT AAA TTT GTG ATC ACG GGA  
Y R M E G C V D G H K F V I T G

GAG GGC ATT GGA TAT CCG TTC AAA GGG AAA CAG GCT ATT AAT CTG TGT  
E G I G Y P F K G K Q A I N L C

GTG GTC GAA GGT GGA CCA TTG CCA TTT GCC GAA GAC ATA TTG TCA GCT  
V V E G G P L P F A E D I L S A

GCC TTT ATG TAC GGA AAC AGG GTT TTC ACT GAA TAT CCT CAA GAC ATA  
A F M Y G N R V F T E Y P Q D I

GTT GAC TAT TTC AAG AAC TCG TGT CCT GCT GGA TAT ACA TGG GAC AGG  
V D Y F K N S C P A G Y T W D R

TCT TTT CTC TTT GAG GAT GGA GCA GTT TGC ATA TGT AAT GCA GAT ATA  
S F L F E D G A V C I C N A D I

ACA GTG AGT GTT GAA GAA AAC TGC ATG TAT CAT GAG TCC AAA TTG TAT  
T V S V E E N C M Y H E S K F Y

GGA GTG AAT TTT CCT GCT GAT GGA CCT GTG ATG AAA AAG ATG ACA GAT  
G V N F P A D G P V M K K M T D

AAC TGG GAG CCA TCC TGC GAG AAG ATC ATA CCA GTA CCT AAG CAG GGG  
N W E P S C E K I I P V P K Q G

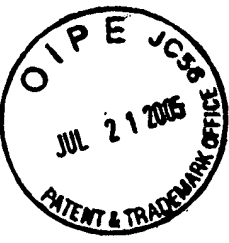
ATA TTG AAA GGG GAT GTC TCC ATG TAC CTC CTT CTG AAG GAT GGT GGG  
I L K G D V S M Y L L L K D G G

CGT TTA CGG TGC CAA TTC GAC ACA GTT TAC AAA GCA AAG TCT GTG CCA  
R L R C Q F D T V Y K A K S V P

AGA AAG ATG CCG GAC TGG CAC TTC ATC CAG CAT AAG CTC ACC CGT GAA  
R K M P D W H F I Q H K L T R E

GAC CGC AGC GAT GCT AAG AAT CAG AAA TGG CAT CTG ACA GAA CAT GCT  
D R S D A K N Q K W H L T E H A

ATT GCA TCC GGA TCT GCA TTG CCC TGA AAGCTT  
I A S G S A L P \* HindIII (SEQ ID NO:15 & 16)



REPLACEMENT SHEET

FIGURE 10

<u>GGA TCC</u>	GCC	CAC	AGC	GAG	CAC	GGC	CTG	ACC	GAG	<u>GAG</u>	ATG	ACC	ATG	AAG	
BamHI	A	H	S	E	H	G	L	T	E	E	M	T	M	K	
TAC	CAC	ATG	GAG	GGC	TGC	GTG	AAC	GGC	CAC	AAG	TTC	GTG	ATC	ACC	GGC
Y	H	M	E	G	C	V	N	G	H	K	F	V	I	T	G
GAG	GGC	ATC	GGC	TAC	CCC	TTC	AAG	GGC	AAG	CAG	ACC	ATC	AAC	CTG	TGC
E	G	I	G	Y	P	F	K	G	K	Q	T	I	N	L	C
GTG	ATC	GAG	GGC	GGC	CCC	CTG	CCC	TTC	AGC	GAG	GAC	ATC	CTG	AGC	GCC
V	I	E	G	G	P	L	P	F	S	E	D	I	L	S	A
GGC	TTC	AAG	TAC	GGC	GAC	CGG	ATC	TTC	ACC	GAG	TAC	CCC	CAG	GAC	ATC
G	F	K	Y	G	D	R	I	F	T	E	Y	P	Q	D	I
GTG	GAC	TAC	TTC	AAG	AAC	AGC	TGC	CCC	GCC	GGC	TAC	ACC	TGG	GGC	CGG
V	D	Y	F	K	N	S	C	P	A	G	Y	T	W	G	R
AGC	TTC	CTG	TTC	GAG	GAC	GGC	GCC	GTG	TGC	ATC	<u>TGT</u>	AAC	GTG	GAC	ATC
S	F	L	F	E	D	G	A	V	C	I	C	N	V	D	I
ACC	GTG	AGC	GTG	AAG	GAG	AAC	TGC	ATC	TAC	CAC	AAG	AGC	ATC	TTC	AAC
T	V	S	V	K	E	N	C	I	Y	H	K	S	I	F	N
GGC	GTG	AAC	TTC	CCC	GCC	GAC	GGC	CCC	GTG	ATG	AAG	AAG	ATG	ACC	ACC
G	V	N	F	P	A	D	G	P	V	M	K	K	M	T	T
AAC	TGG	GAG	GCC	AGC	TGC	GAG	AAG	ATC	ATG	CCC	GTG	<u>CCT</u>	AAG	CAG	GGC
N	W	E	A	S	C	E	K	I	M	P	V	P	K	Q	G
ATC	CTG	AAG	GGC	GAC	GTG	AGC	ATG	TAC	CTG	CTG	CTG	AAG	GAC	GGC	GGC
I	L	K	G	D	V	S	M	Y	L	L	L	K	D	G	G
CGG	TAC	CGG	TGC	CAG	TTC	GAC	ACC	GTG	TAC	AAG	GCC	AAG	AGC	GTG	CCC
R	Y	R	C	Q	F	D	T	V	Y	K	A	K	S	V	P
AGC	AAG	ATG	CCC	GAG	TGG	CAC	TTC	ATC	CAG	CAC	AAG	CTG	CTG	CGG	GAG
S	K	M	P	E	W	H	F	I	Q	H	K	L	L	R	E
GAC	CGG	AGC	GAC	GCC	AAG	AAC	CAG	AAG	TGG	CAG	CTG	ACC	GAG	CAC	GCC
D	R	S	D	A	K	N	Q	K	W	Q	L	T	E	H	A
ATC	GCC	TTC	CCC	AGC	GCC	CTG	GCC	TGA	<u>AAGCTT</u>						
I	A	F	P	S	A	L	A	*	HindIII						

(SEQ ID NOS: 17 & 18)



## REPLACEMENT SHEET

FIGURE 12

GGA TCC GCC TCC CTG CTG ACC GAG ACC ATG CCC TTC AGG ACC ACC ATC  
BamHI A S L L T E T M P F R T T I

GAG GGC ACC GTG AAC GGC CAC TAC TTC AAG TGC ACC GGC AAG GGC GAG  
E G T V N G H Y F K C T G K G E

GGC AAC CCC CTC GAG GGC ACC CAG GAG ATG AAG ATC GAG GTG ATC GAG  
G N P L E G T Q E M K I E V I E

GGC GGC CCC CTG CCC TTC GCC TTC CAC ATC CTG TCC ACC TCC TGC ATG  
G G P L P F A F H I L S T S C M

TAC GGC TCC AAG GCC TTC ATC AAG TAC GTG TCC GGC ATC CCC GAC TAC  
Y G S K A F I K Y V S G I P D Y

TTC AAG CAG TCC CTC CCC GAG GGC TTC ACC TGG GAG CGC ACC ACC ACC  
F K Q S L P E G F T W E R T T T

TAC GAG GAC GGC GGC TTC CTG ACC GCC CAC CAG GAC ACC TCC CTG GAC  
Y E D G G F L T A H Q D T S L D

GGC GAC TGC CTG GTG TAC AAG GTG AAG ATC CTG GGC AAC AAC TTC CCC  
G D C L V Y K V K I L G N N F P

GCC GAC GGC CCC GTG ATG CAG AAC AAG GCC GGC CGC TGG GAG CCC TCC  
A D G P V M Q N K A G R W E P S

ACC GAG ATC GTG TAC GAG GTG GAC GGC GTG CTG CGC GGC CAG TCC CTG  
T E I V Y E V D G V L R G Q S L

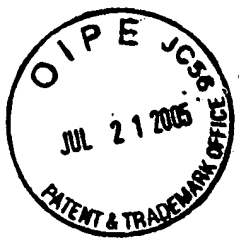
ATG GCC CTG GAG TGC CCC GGC GGT CGC CAC CTG ACC TGC CAC CTG CAC  
M A L E C P G G R H L T C H L H

ACC ACC TAC CGC TCC AAG AAG CCC GCC TCC GCC CTG AAG ATG CCC GGC  
T T Y R S K K P A S A L K M P G

TTC CAC TTC GAG GAC CAC CGC ATC GAG ATC CTG GAG GAG GTG GAG AAG  
F H F E D H R I E I L E E V E K

GGC AAG TGC TAC AAG CAG TAC GAG GCC GCC GTG GGC CGC TAC TGC GAC  
G K C Y K Q Y E A A V G R Y C D

GCC GCC CCC TCC AAG CTG GGC CAC AAC TGAAGCTT  
A A P S K L G H N \* HindIII (SEQ ID NO:21 & 22)



## REPLACEMENT SHEET

FIGURE 13

ATG GCC TCC CTG CTG ACC GAG ACC ATG CCC TTC AGG ACC ACC ATC  
M A S L L T E T M P F R T T I

GAG GGC ACC GTG AAC GGC CAC TAC TTC AAG TGC ACC GGC AAG GGC GAG  
E G T V N G H Y F K C T G K G E

GGC AAC CCC CTC GAG GGC ACC CAG GAG ATG AAG ATC GAG GTG ATC GAG  
G N P L E G T Q E M K I E V I E

GGC GGC CCC CTG CCC TTC GCC TTC CAC ATC CTG TCC ACC TCC TGC ATG  
G G P L P F A F H I L S T S C M

TAC GGC TCC AAG GCC TTC ATC AAG TAC GTG TCC GGC ATC CCC GAC TAC  
Y G S K A F I K Y V S G I P D Y

TTC AAG CAG TCC CTC CCC GAG GGC TTC ACC TGG GAG CGC ACC ACC ACC  
F K Q S L P E G F T W E R T T T

TAC GAG GAC GGC GGC TTC CTG ACC GCC CAC CAG GAC ACC TCC CTG GAC  
Y E D G G F L T A H Q D T S L D

GGC GAC TGC CTG GTG TAC AAG GTG AAG ATC CTG GGC AAC AAC TTC CCC  
G D C L V Y K V K I L G N N F P

GCC GAC GGC CCC GTG ATG CAG AAC AAG GCC GGC CGC TGG GAG CCC TCC  
A D G P V M Q N K A G R W E P S

ACC GAG ATC GTG TAC GAG GTG GAC GGC GTG CTG CGC GGC CAG TCC AGC  
T E I V Y E V D G V L R G Q S S

ATG GCC CTG GAG TGC CCC GGC GGT CGC CAC CTG ACC TGC CAC CTG CAC  
M A L E C P G G R H L T C H L H

ACC ACC TAC CGC TCC AAG AAG CCC GCC TCC GCC CTG AAG ATG CCC GGC  
T T Y R S K K P A S A L K M P G

TTC CAC TTC GAG GAC CAC CGC ATC GAG ATC CTG GAG GAG GTG GAG AAG  
F H F E D H R I E I L E E V E K

GGC AAG TGC TAC AAG CAG TAC GAG GCC GCC GTG GGC CGC TAC TGC GAC  
G K C Y K Q Y E A A V G R Y C D

GCC GCC CCC TCC AAG CTG GGC CAC AAC TGA  
A A P S K L G H N \*

(SEQ ID NO:23 &amp; 24)